

## CLAIMS:

What is claimed is:

- 1           1.       A method comprising:  
2           receiving a downlink broadcast burst from a base station;  
3           determining timing for sending an uplink burst;  
4           selecting a training sequence for the uplink burst; and  
5           transmitting the uplink burst using the selected training sequence.
- 1           2.       The method of Claim 1 wherein selecting the training sequence comprises  
2 randomly selecting from among a set of predetermined training sequences.
- 1           3.       The method of Claim 2 wherein randomly selecting comprises generating  
2 a random number and applying the random number to select from among the set of  
3 predetermined training sequences.
- 1           4.       The method of Claim 1 wherein selecting the training sequence comprises  
2 determining a digit from an identification number of the user terminal and applying the  
3 determined digit to select from among a set of predetermined training sequences.
- 1           5.       The method of Claim 1 wherein receiving a downlink broadcast burst  
2 comprises receiving an indication of a set of predetermined training sequences for use in  
3 selecting a training sequence.
- 1           6.       The method of Claim 1 wherein determining timing comprises  
2 determining timing of a broadcast channel on which the broadcast burst was received.
- 1           7.       The method of Claim 1 wherein determining timing comprises  
2 determining nominal timing relative to a frame of the broadcast burst.

1           8.     The method of Claim 1 wherein determining timing comprises  
2 determining timing on a broadcast channel on which the broadcast burst was received.

1           9.     The training sequence of Claim 1 wherein the repetition of the core  
2 sequence comprises a repetition of the core sequence successively a specified number of  
3 times.

1           10.    The training sequence of Claim 1 wherein the core sequence consists  
2 essentially of 12 symbols.

1           11.    The training sequence of Claim 1 wherein the core sequence has a  
2 normalized cross-correlation of about 1/3.

1           12.    The training sequence of Claim 1 wherein the core sequence has a  
2 normalized autocorrelation of about 1/3.

1           13.    The training sequence of Claim 1 wherein the absolute value of the mean  
2 of the core sequence about zero.

1           14.    A machine-readable medium having stored thereon data representing  
2 sequences of instructions which, when executed by a machine, cause the machine to  
3 perform operations comprising:

4           receiving a downlink broadcast burst from a base station;

5           determining timing for sending an uplink burst;

6           selecting a training sequence for the uplink burst; and

7           transmitting the uplink burst using the selected training sequence.

1           15.    The medium of Claim 14 wherein the instructions causing the machine to  
2 perform operations comprising selecting the training sequence further comprise

3 instructions for randomly selecting from among a set of predetermined training  
4 sequences.

1 16. The medium of Claim 15 wherein the instructions causing the machine to  
2 perform operations comprising randomly selecting further comprise instructions for  
3 generating a random number and applying the random number to select from among the  
4 set of predetermined training sequences.

1 17. The medium of Claim 14 wherein the instructions causing the machine to  
2 perform operations comprising selecting the training sequence further comprise  
3 instructions for determining a digit from an identification number of the user terminal and  
4 applying the determined digit to select from among a set of predetermined training  
5 sequences.

1 18. The medium of Claim 14 wherein the instructions causing the machine to  
2 perform operations comprising receiving a downlink broadcast burst further comprise  
3 instructions for receiving an indication of a set of predetermined training sequences for  
4 use in selecting a training sequence.

1 19. An apparatus comprising:  
2 a receiver to receive a downlink broadcast burst from a base station;  
3 a processor to determine timing for sending an uplink burst, and to select a  
4 training sequence for the uplink burst; and  
5 a transmitter to transmit the uplink burst using the selected training sequence.

1 20. The apparatus of Claim 19 wherein the processor further selects the  
2 training sequence by randomly selecting from among a set of predetermined training  
3 sequences.

1           21.     The apparatus of Claim 20 wherein the processor randomly selects by  
2     generating a random number and applying the random number to select from among the  
3     set of predetermined training sequences.

1           22.     The apparatus of Claim 19 further comprising a register containing an  
2     identification number of the apparatus and wherein the processor selects by determining a  
3     digit from the register and applying the determined digit to select from among a set of  
4     predetermined training sequences.

1           23.     The apparatus of Claim 19 wherein the receiver receives a downlink  
2     broadcast burst including an indication of a set of predetermined training sequences for  
3     use in selecting a training sequence.

1           24.     The method of Claim 1 wherein determining timing comprises  
2     determining timing of a broadcast channel on which the broadcast burst was received.